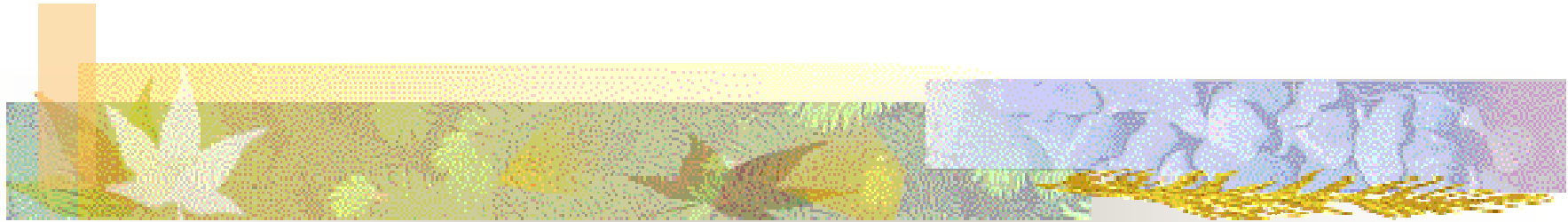


Special Seminar for China Earthquake Relief Fundraiser



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Fertility and Women's Healthcare
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Topic #1 Studies of TCM Kidney Tonic Herbs
in the Treatment of Infertility due to Ovarian
Dysfunction

----- Reviewed studies from China

Topic #2 Clinical Experience in Management
some Special Fertility Issues in TCM

----- Case studies and more



Studies of TCM Kidney Tonic Herbs in The Treatment of Infertility due to Ovarian Dysfunction ----- Reviewed studies from China

Kidney Deficiency is the Basis of Ovarian Dysfunctional Infertility

- **From point of view of TCM concept of female reproductive function**
- **The new finding from integrative medical studies on Kidney Nature**
- **The new finding from Chinese herbal pharmaceutical studies that show Kidney Tonic herbs strongly affect the reproductive system**



Clinical Studies

- **First of all examine the effectiveness of TCM treatment**
- **Secondly seek to find the better formula or better idea(such as combination of TCM and Western Medicine) to improve the treatment outcome.**
- **Thirdly, explore the effectiveness of mechanism of TCM treatment for infertility**



Clinical Studies 1

Clinical Observation of Kidney tonic with Blood promoting decoction in the treatment of ovarian dysfunctional infertility

By Yang Gui Yun from Journal of Chinese Integrated Medicine 2002(2) 138 – 139

Yang reported a total of 150 cases, divided into 2 groups:

Treatment group ---- Herbal treatment (120 cases)

Control group -----Clomiphen citrate (30 cases)



Treatment Methods

Herbal treatment group:

- **Basic Kidney tonic and Blood promoting herbs:**

Tu Si Zi, Zi He Che, Dang Gui, Chuan Xiong, Shan Yao

- **Modifications(TCMPT)**

Follicular phase: plus Shan Zhu Yu, Shu Di Huang

Ovulatory phase: plus Chuan Niu Xi, Gui Zhi, Hong Hua

Luteal phase: plus Lu Jiao Jiao, Xian Ling Pi

Control Group:

Clomiphen citrate: 50 – 100mg, qd, 5 days started at day 5

Results of Clinical Studies 1

1. Pregnancy rate in two groups with course of treatment

Cases of preg.(rate of preg.)

Group	N	1-3 months	4-6 months	7-12 months	Total
Herbs	120	11(9.2%)	28(23.3%)	35(29.2%)	74(61.7%)*
Clomiphen	30	2(6.7%)	6(20.0%)	5(16.7%)	13(43.3%)*

* P > 0.05

2. Herbs group have a much better effect on menstrual cramping and breast tenderness than the Clomiphen group.



Clinical Studies 2

**A clinical study on Inducement of Ovulation
by Kidney Tonifying and Chong-Vessel
Regulating**

**By Wang Xia Ling, New Chinese Medicine
2003, 35(2)19-21.**

**This is a randomized control study to compared
Kidney-Tonic herb to clomiphen citrate for functional
anovulation-caused Infertility. Each group have 30
cases, the result showed the pregnancy rate in two
group have no difference.**



Clinical Studies 3

101 cases of Endocrine Dysfunctional Infertility Treated by a Combination of Chinese and Western Medicine

**By Chen Yi Xin, Qian Zu Qi from
Shanghai Journal of TCM 2000 (9) 26-27.**

The goal of the study is to observe the effectiveness of integrated Chinese and Western medicine in the treatment of ovarian dysfunctional infertility compare to western medicine alone group.



Treatment Methods

Integrated group(101 cases):

Kidney Tonic based on TCMPT:

- **Follicular phase:** Shu Di Huang, Tu Si Zi, Huai Shan Yao, Rou Chong Long
- **Ovulatory phase:** Dan Shen, Xiang Fu, She Chuang Zi, Huai Niu Xi, Hong Hua
- **Luteal phase:** Rou Chong Long, Huai Shan Yao, Dang Gui, Tu Si Zi, Shu Di Huang



Western medicine:

Clomiphen Citrate 50mg qd x 5 days

LHRH. 25ug, Bid, 3 – 5 days, started at Day 10

Western medicine group(126 cases):

Clomiphen and LHRH, same as in the integrated group



Result of Clinical Studies 3

1. Ovulatory rate:

Integrated group: 85%

Western Med group: 80%

The ovulatory rate in the two groups has no significant difference

2. Pregnancy rate:

Integrated group: 78%

Western Med Group: 46%

The pregnancy rate has a significant difference in the two groups ($p < 0.05$)



Clinical Studies 4

Reported by Tang Su Hua at New Chinese Medicine 2002, 34(6) 37-38.

Goal: A randomized control study, To observe the effectiveness of ovarian dysfunctional infertility treated by integrated TCM and Western Medicine compare to Western medicine use only.

Cases: 60 cases, divided into two groups of 30 cases each.



Results of Clinical Studies 4

Ovulatory Rate:

Integrated group: 22/30 (73.3%)

Control group: 21/30 (70.0%) ($p > 0.05$)

Endometrial thickness:

during ovulatory phase, $\geq 6 - 12\text{mm}$

Integrated group: 23/30 (77%)

Control group: 10/30 (33%) ($p < 0.05$)

Pregnancy Rate:

Integrated group: 16/30 (53%)

Control group: 9/30 (30%) ($p < 0.05$)



Summary

- **The pregnancy rate of Kidney tonic herbs for ovarian dysfunctional infertility is roughly between 40 to 75%.**
- **The pregnancy rate for the kidney tonic herbs group and clomiphen citrate group is roughly the same. Usually the clomiphen group has a better ovulation rate, herbs group has a lower miscarriage rate.**
- **The combination of TCM and western medicine group has a significantly higher pregnancy rate than TCM group or western medicine group.**



Experimental Studies

To explore the mechanism of Kidney tonic herbs effect on women's reproductive system. The studies have mostly focused on the following aspects:

1. The weight or size change in ovary or uterus
2. Follicular development and ovulation inducement
3. The serum hormone (E2, P, etc) and hormone receptor (ER, PR) change.
4. Uterine lining function: endometrial thickness, morphology and uterine arteries blood flow
5. Hypothalamus and pituitary effect



Experimental Report 1

Experimental animal study on the effectiveness of regulating menses and inducing ovulation with kidney tonic herbal formula

By Zhang Shu Chen, Journal of TCM 1999.40(6) 359-371.

A controlled study to explore the effect of Kidney tonic herbs on ovulatory rate, egg quality, and morogenetic cell quality in mice compared to placebo and Western ovarian stimulation medicine groups (OSM) to find the difference between TCM and Western medicine.



Group and Method

1. **Kidney tonic herb group:** Dang Gui, Tu Si Zi, Gou Qi Zi, Huang Qi, Fu Peng Zi, Baji Tian etc.
2. **OSM control group:** Clomiphen citrate, PMS (Pregnancy Horse Serum), hCG
3. **Placebo group:** water equivalent to amount of herbal decoction



Results of experimental report 1

- 1) Kidney tonic herbs significantly increased ovulatory number and follicular development compared to placebo group ($p < 0.01$).**
- 2) Compared to OSM group, ovulatory number in Herb group is lower, but close to 50%, and Herbal group had a higher number of normal egg cells than the OSM group (73% vs 60%), as well as morogenetic cell (embryos 4 days after copulation, or morula) development (50% vs 30%) ($p < 0.01$).**



Experimental Report 2

**Study of NuZhen YunYu Decoction on
Histomorphological Endometrium and
Expression of Estrogen Receptor and Factors
of the Formation of Capillaries**

By Xia Yu Wei, Zhan Shi Chen et al.

**From Journal of TCM Information of China,
2004.11(1) 26-28**



Methods

The histomorphology and immunohistochemistry of the endometrium was tested in the LH-2 phase in women infertile due to ovarian dysfunction or thin endometrium treated with NuZhen Yunyu Decoction for three cycles.

NuZhen Yunyu Decoction(NYD):

Tu Si Zi, Nu Zhen Zi, Dang Gui, Dan Shen, Gou Qi Zi, Chai Hu, Fu Pen Zi, Bai Shao, Gan Cao, etc.



Results

- 1. The proliferation of the endometrium significantly increased.**
- 2. The expression of ER and PR significantly increased.**
- 3. The expression of all factors for the formation of the capillaries that were checked were significantly increased.**

The results indicated that NYD can promote the development of the endometrium and improve the synthesis and formation of the capillaries, suggesting that NYD can promote pregnancy through its effect on positive regulation of the endometrium.



Experimental Report 3

Experimental Study in Embryo Implantation Improvement with Acupuncture in Rats

By Huay Guanyin, Tungji Medical School,
Integrative Medicine Institute

The Seventh Congress of China Integrated
Medicine in OBGYN, October 2007



Groups and Methods

Rats were divided into three groups:

- 1) **Mifeprex Group:** Used Mifeprex to simulate an implantation disorder
- 2) **Mifeprex plus Acupuncture Group:** Received acupuncture daily for seven days using points ST36, SP 6 and LV3
- 3) **Control Group:** water equivalent to amount of Mifeprex



Results:

1. **The pregnancy rate and number of implanted embryos** in the acupuncture group were significantly higher than in the Mifeprex group and closed to control group
2. **The PR and PRLR protein and PR and PRLR mRNA expression** in the acupuncture group was significantly higher than in the Mifeprex group and closed to control group
3. **The serum P4 and PRL level** in the acupuncture group were significantly higher than in the Mifeprex group and closed to control group
4. **The development of the endometrium** was much better in the acupuncture group than the Mifeprex group and closed to control group



Experimental Report 4

Effects of Tiaojing Yunyu formula on the Test of Follicular and Endometrial Development and Characteristics of Blood Flow in Women with Ovarian Dysfunctional Infertility

**By Chen Qiu Mei, Zhang Shu Chen
From Chinese Journal of Experimental
Traditional Medical Formulae**



Methods

- 1. Observe the effects of Tiaojing Yunyu Formula(TYF) compared to clomiphen citrate(CC). Also self compare before and after treatment.**
- 2. The color doppler ultrasound was used to monitor many markers from day LH -4 to LH+7 for treatment group (TYF) and control group (CC)**
- 3. TYF: Shu Di Huang, Tu Si Zi, Fu Pen Zi, Shan Zhu Yu, Rou Cong Rong, Gou Qi Zi, Dang Gui, etc.**



Results

- 1.** The follicular development monitor found that TYF group had better results than the CC group, especially on day LH-1
- 2.** The endometrial growth rate from LH-4 through LH+1 was significantly higher in TYF group than CC group.
- 3.** Many rheology markers showed significant improvement in the TYF group ($p < 0.05$), but no change in the CC group.
- 4.** Uterine and Ovarian RI and PI showed significant decrease in TYF group ($p < 0.05-0.01$), but no change in the CC group
- 5.** All the test markers showed significant improvement within the group of women who became pregnant using TYF.

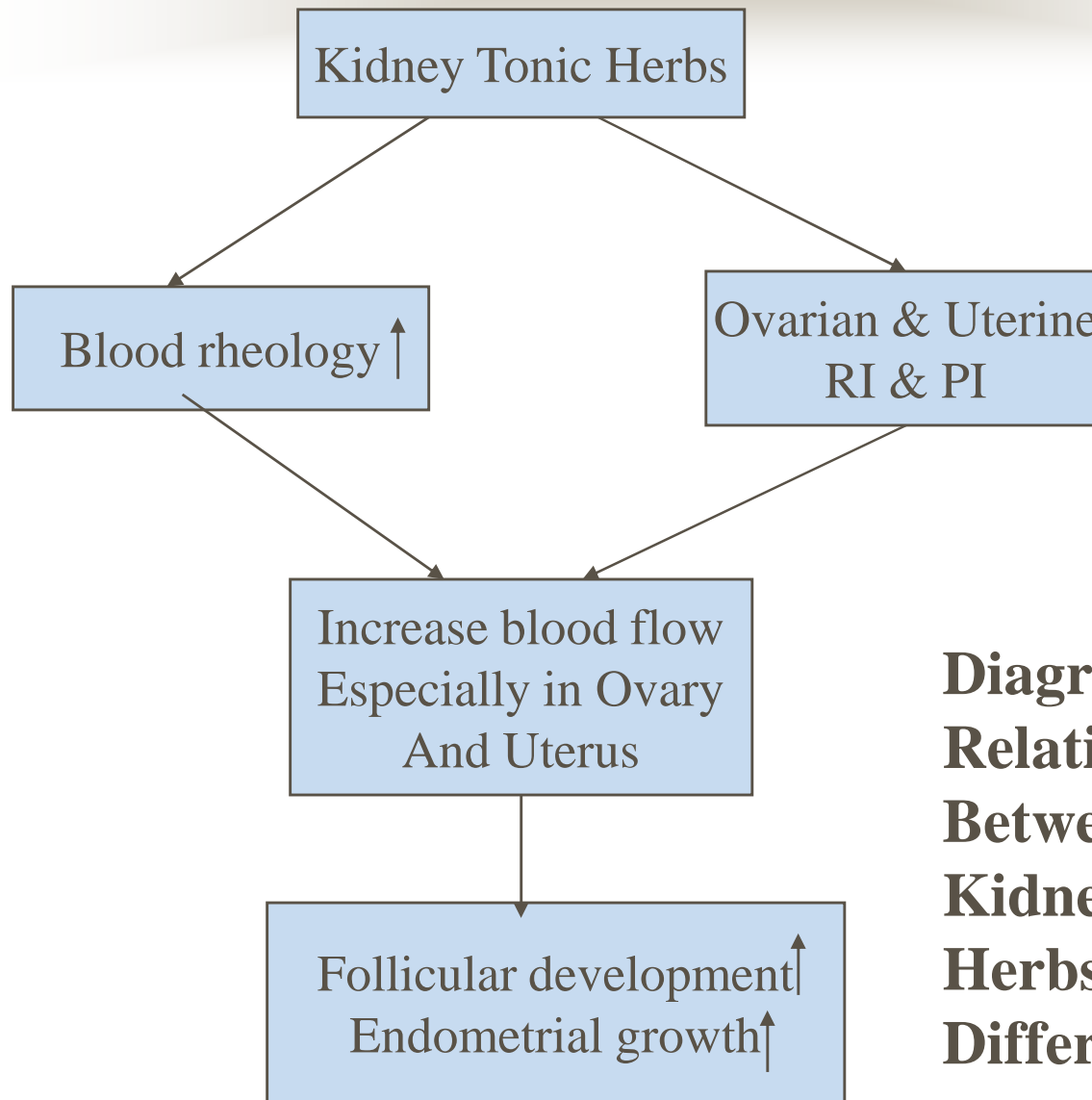


Diagram showing Relationship Between the Kidney Tonic Herbs and the Different Markers



Experimental Report 5 and 6

5: Effects of Bushen GuChong Formula on Pituitary in Androgen-Sterilized Rats (ASR)

By Du HuiLang et al. TCM Science of China, 2002.9(2)100-101.

6: Effects of Tiangui Recipe on Expressions of Hypothalamic Leptin Receptor and mRNA of Neuropeptide Y in Androgen-Sterilized Rats

By Sun Fei, Yu Jin, Journal of Integrated Western and TCM of China.



Methods

- 1. A controlled study, mainly herbal group compared to placebo group**
- 2. Herbal group: Bushen Guchong formula(BGF) and TianQui recipe(TGR). Both are kidney tonic herbal formulas.**
- 3. Androgen-sterilized rat (ASR) model. ASR are characterized by obesity and anovulation.**




Results

- **Report 5 showed BGF can improve pituitary morphology and secretion and lower the serum PRL**
- **Report 6 showed that the increased hypothalamic neuropeptide Y (NPY) and decreased hypothalamic leptin receptor (OB-R)mRNA expression may be important contributing factors to the development of obesity anovulation in ASR. The TGR may play a role in reducing weight and inducing ovulation by regulating NPY/OB-RmRNA expression.**



Discussions on the role of TCM

- 1. According to thousands of years of successful use, countless case reports and many clinical and experimental studies, a definitive role for TCM in the treatment of infertility has been established.**
- 2. Due to the complication of Chinese Herbal Medicine and the limitations of the scientific work, many studies might still be far behind that of the standard research done in conventional medicine. We need to work harder to improve the research level to meet the standard.**



3. TCM Kidney tonic herb have the roughly same pregnancy rate with clomiphen citrate in the treatment of ovarian dysfunctional infertility. TCM combined with Western medicine treatment resulted in a much higher pregnancy rate than the Western medicine used alone. These results suggest that TCM must have a different way to affect the reproductive system. For instance, Kidney tonic herbs with blood promoting herbs not only affect follicle development, ovulation inducement and luteal phase support, but also work on the endometrial function and regulate the hypothalamic-pituitary-ovarian axis as well. The form of effectiveness is as we always describe: The regulation of organisms as a whole.



Clinical Experience in Management of some Special Fertility Issues in TCM

----- Case studies and more

- Acupuncture for IVF patients (points and schedule)
- Repeated IVF-Implantation Failures and Recurrent Miscarriages
- Diminished Ovarian Reserve (high FSH level):



Acupuncture for IVF and other Fertility patients

----- points and schedule



Major Acupuncture Points for IVF and other Infertility Patients

- Points to Regulate the Reproductive Endocrine System
 - 6 abdominal points: CV 3, CV 4, ST 29, zi gong
 - 2 extremity points: ST 36, SP6
 - Ear points: ovary, uterus
- Points to Promote Qi and Blood Flow
 - LI4, LV 3, SP 10 plus group 1 points
- Points for Relaxation
 - Ear shen men, Ht 7, DU 24
- Points for lifting Qi
 - Du 20, Ear Kidney, ST36



Recommended Schedule of Acupuncture for IVF and other fertility cases

Preparation Period

2-3 months before IVF cycle, 1-2 treatments /wk

2-4 weeks before stimulation, 2 times /wk

Stimulation Period (usually 7-10 days or 2 wks)

3 times per week up to the day of retrieval

Retrieval 1-2 treatment between retrieval and transfer

Embryo Transfer: Treatment before and after transfer on the day of the transfer

Post-Transfer 1 treatment 2 days after transfer, then every 5 days

Pregnancy 1 treatment per week through 12 weeks



Recommended Acupuncture Points for IVF in Different Periods of the Cycle

Preparation Period

CV 3, CV 4, ST 29, Zigong, ST 36, SP 6

Ear points: ovary, uterus

Stimulation Period

Same points as above, plus electrical stimulation

Retrieval

CV3, CV4, Zigong, SP10, SP6, Ear ovary& uterus

Embryo Transfer (ET):

Before ET: DU 24, DU20, ST 29, LV 3, PC 6 and SP 8

After ET: DU 24, DU 20, ST 36, SP 6, LI 4 and SP 10

Ear points before and after: uterus, ovary, shenmen

Post-Transfer: Same as after ET

Pregnancy: Du24, Du20, Zigong ST36, SP6&Ear points



Recurrent Miscarriages and Repeated IVF-implantation Failure

Definitions

Recurrent miscarriage:

At least three pregnancy losses

Repeated IVF-implantation failure:

At least four IVF cycles without pregnancy



Causes of RM & RIVFF and TCM Treatment Principles

- 1) Embryo quality
 - Tonify Kidney Essence
- 2) Immunologic factor
 - Regulate and balance
- 3) Luteal Phase Defect
 - Tonify Kidney Yang Qi
- 4) Endometrial receptivity
 - Tonify and move Blood
- 5) Inherited thrombophilia
 - Promoting Blood flow



Case #1: Recurrent Miscarriage

Female 35 years old, first office visit 12/6/04

Main complaint:

Tried to conceive for five years

Pregnancy loss three times

Secondary infertility for two years

Case history: The patient had two pregnancy losses during her first two years of trying. After that, she started to see a regular OBGYN doctor and fertility specialist. None of them could find any reason except that the uterine lining was too thin and her menstrual period (MP) flow became much lighter.



Case #1: Recurrent Miscarriage (Cont'd)

The patient started to see Dr. Ellen Beer, the most famous Reproductive Immunologist in the U.S. Eight months prior to visiting to my office, the patient had been diagnosed with Category 5 Immunological problems. She had a high NK cell count and four other immunological abnormalities. She received two IVIg (Intravenous Immunoglobulin G) injections and also other immune suppression medication such as Humira.



Case #1: Recurrent Miscarriage (cont'd)

The patient had her first IVF after the first IVIg treatment, but without success. Three months before visiting my office, she received another IVIg treatment and pregnancy did occur, but ended in miscarriage. To that date, the patient had received six months of immunological treatments. Blood tests showed that all other immune factors besides NK cells had gotten noticeably lower, though still not in the normal range. NK cells had lowered a bit, but still remained high. After all of this, the patient started looking for alternative help.



Recurrent Case #1: Miscarriage (cont'd)

The patient appeared a little over-weight, with a slightly red and oily complexion. She complained of chest tightness, joint pain, palpitations, easy to feel tired and a regular but light MP. Her tongue was dark red with a yellow greasy coating. The pulse was thin and a little slippery.



Case #1: Recurrent Miscarriage (cont'd)

TCM differential diagnosis:

Damp heat, especially invading Blood and Chong Ren, with underlying Spleen and Kidney deficiency.

Treatment principle (plan):

First step: Clear the heat and remove dampness

Second step: Treat underlying Spleen and Kidney deficiency

Treatment schedule:

Acupuncture treatments twice a week and herbal medicine (raw) twice daily.



First visit


Herbal formula:

Wen Dan Tang (温胆汤) plus niu xi, he ye,
yi ren, xiang fu for four days

Acupuncture points:

CV 3, CV 4, ST 29 & zigong,
LI 4, LV 3, SP 6, ST 40.


Ear Points: zigong & ovary



After four days, on her second visit, the patient reported great improvement in all of her symptoms. Her tongue turned a little fresher and the coating was almost cleaned out.


The acupuncture points remained the same. I added a few herbs to slightly tonify Spleen and Kidney and to promote Blood flow, such as huai shan yao (淮山药), nu zhen zi (女贞子) and dan shen (丹参).

After two weeks of treatment, the patient's tongue color changed to pink, though still a little dark. The coating was totally clean, white.




The treatments then moved to step two: Tonify Spleen and Kidney more (60%) and clean dampness and move blood (40%). I removed LI 4 and LV 3 from the acupuncture points and added ST 36.

The patient moved back to Taiwan. She continued with Dr. Beer's treatments and my herbs for another four weeks. After eight weeks of these treatments, her blood tests came back normal, including NK cells. She then started another IVF cycle, still without success, although the quality and quantity of the embryos seemed good. Further tests showed that this patient's uterine lining was being attacked by NK cells. Dr. Beer postulated that the medication used in IVF was making the immune reaction worse. He think this case was one of the most difficult in their practice.



The patient continued the same treatment protocols, combining both Western medicine and Chinese herbal treatments. Two months after the failed IVF, she visited New York City and found her pregnancy test positive. She came to my office right a way. She said she was feeling a little tired and had abdominal cramping. Her tongue was a little pale and dark with a white coating (no damp heat sign).



The patient received three sessions of acupuncture treatments in the week she stayed in New York. The acupuncture points were DU 20, DU 24, CV 4, zigong, SP 6 and ST 36, Ear Uterus and Ovary.

The herbal formula mainly tonified Qi (Spleen and Kidney) with the secondary aim of improving blood flow and resolving dampness.

The patient then went back to Taiwan, continuing with the new herbal formula through 12 weeks of pregnancy along with Dr. Beer's treatments. Her pregnancy wasn't smooth, but carried through the whole term. She successfully delivered a health baby girl who is now two years old.



Discussion:

1. A good individual treatment plan is very important.
2. Damp Heat in certain cases and certain periods of the time can be a major pattern of immunological recurrent miscarriage. Wen Dan Tang (温胆汤) combined with Si Miao San (四妙散) can have a good result. Spleen and Kidney deficiency can still be underlying major causes.
3. A combination of conventional medicine and Chinese herbal medicine can have a better result for the patient.
4. According to research from china, Kidney Yin deficiency can be a major cause of immunological infertility or miscarriage, Zhi Bai Di Huang (知柏地黄丸) is another good choice.



Case Report #2:


Recurrent Miscarriage

---- Letter from a Patient

November 19, 2007

Dear Dr. Zheng,

I am forever grateful to you for giving me the greatest gift – the gift of a child. Before meeting you I had been experiencing 3 straight years of bad luck. First I lost my son at 39 weeks due to a cord accident. Then I suffered from secondary infertility and recurrent pregnancy loss having experienced 2 miscarriages and 2 chemical pregnancies after going through 2 IUIs and 3 IVFs.



My western Reproductive Endocrinologist finally told me that he didn't think I could have kids and told me to look into adoption or donor eggs. That was when I found you. You did not think I was a lost cause and told me that after 3 months of acupuncture and herbs and I could try naturally. I did not believe you that I could get pregnant naturally, but **EXACTLY** 3 months after my first acupuncture session with you I took a home pregnancy test and found out I was pregnant – **NATURALLY!**

Because I suffered 4 miscarriages in the past, I continued to see you and we successfully made it past the 1st trimester. My pregnancy went on to be picture perfect.

Dr. Zheng thank you so much for helping me achieve my dream of having a child. You are a miracle doctor and I am forever grateful.

Best wishes!



Summary of case history:

- Female 32 years old
- Tried to conceive for three years.
- Had two IUI's, three IVF's and four early miscarriages. With each IVF, she had 10-12 eggs. In the last round, she had two normal eggs out of 10 after PGD.
- Had a short luteal phase (9-10days), spotting six to seven days after ovulation.



Treatment plan and outcome:

Step one: Three months of preparation. Acupuncture once a week, herbs daily. The herbal formula mainly tonified Kidney and Spleen. The acupuncture prescription was regular protocol.

Step two: Start to try to conceive. Two sessions of acupuncture before ovulation, one session on the day of ovulation, one session seven days after ovulation for implantation.

Pregnancy test positive!

Step three: Prevent miscarriage.



Case Report #3:

Repeated IVF-Implantation Failure


-----e-mail from a patient

July 30, 2006


Hi Dr. Zheng,

I hope all is well with you

As promised, I wanted to let you know how the treatment here in Columbia is going. Surprisingly, everything has gone very well. Not only better than expected but better than the last 4 invitros.



The day of the retrieval was excellent. I had 9 follicles and eight eggs were retrieved. A record for me. Six of them fertilized! Imagine that the worst ones were as good or better than the last 4 invitros. All were grade 1 (best grade), **INCREDIBLE**. The transfer took place on day three, three embryos were transferred, two eights and one of 9. The embryologist and dr. said they were textbook perfect!



The transfer went perfectly too. We got all teary eyed (including the doc) on how well everything went. We were just waiting for the pregnancy test in about two weeks.

Dr. Zheng, there is no doubt in my mind and in my husbands mind that you helped tremendously. Before we started seeing you on a regular basis my egg production was very poor, nor did the quantity or quality compare at all to this invitro. Even though my ovaries are 4 years older since first IVF, you have been a miracle worker.

Thank you so much!



Summary of case history

- 39 year old woman
- Secondary infertility for two years, four IVF failures, low ovarian reserve (FSH 10.2). Her doctor suggest egg donor IVF.
- Was on DHEA 3 months before her third IVF



Summary of TCM treatments and outcome

TCM treatment was focused on tonifying kidney Essence and Liver Blood with a little promoting Qi and blood. Acupuncture treatments were once a week, granulated herbs twice daily.

After one month of treatments, day 2 FSH was lowered to 4. When the patient started her fourth IVF, her ovaries responded the same as before. Four eggs, two fertilized, one grade 2 embryo and another one with poor quality. The fourth IVF failed again, and the doctor suggested egg donor IVF.

The patient continued with my treatment program for another four months. After six months of preparation, her fifth IVF was excellent as she mentioned in the e-mail. She has healthy twin boys now.



Discussion:

1. Report of DHEA research shows that after DHEA supplementation women produce eggs that result in statistically significantly more chromosomally normal embryos, suggesting the possibility that egg quality can be improved.
2. A study about the effect of kidney tonic herbs on egg quality in mice suggests that these herbs can improve the egg quality of mice.
3. The whole human follicular recruitment process takes 4.5 months (according to CHR. Other sources suggest 6 months).
4. Following from the three points above and my personal experience, a good amount of time to prepare using herbal medication and acupuncture is 3-6 months. Preparation for this amount of time appears to improve egg quality and increase the pregnancy rate.



Diminished Ovarian Reserve

(high FSH level)

Ovarian reserve: describes both the quantity and quality of eggs in the ovary

Diminished Ovarian Reserve: the quality and quantity of the eggs declines

Premature ovarian failure (POF)

POF is the absolute cessation of ovarian function in women under age 40. They may stop having MP with accompanying hot flashes because the ovaries are no longer secreting adequate amounts of estrogen.



Test for ovarian reserve

- 1) Serum FSH test on cycle day 2 or 3
- 2) Clomiphene challenge test
- 3) Response to stimulation and antral follicle counts
- 4) Anti-Müllerian Hormone (AMH)



TCM Treatment for Diminished Ovarian Reserve

Treatment Principle:

Tonify Kidney Essence
& Invigorate Blood

Major Formulas:

WuZiYanZhong(五子衍宗丸) &
ZuoGui (左归丸)or YouGui(右归丸)
Plus SiWu Tang(四物汤)



Diminished Ovarian Reserve(cont'd) Frequently Used Herbs & Dosages

Kidney Tonic:

GouQiZi 15-30g, TuSiZi 15-60g, ShuDi 15-30g
FuPenZi 15-30g, WuWeiZi 6-15g, XuDuan 15-20g
HuaiNiuXi 15-30g, DuZhong 15-20g, ShangYao 15-30g,
NuZhenZi 15-20g, LuJiaoJiao 15-20g,
GuiBanJiao 15-30g, XianMao 9-20g, XianLingPi
6-15g



Diminished Ovarian Reserve(cont'd) Frequently Used Herbs & Dosages

Invigorate (Quicken the) Blood:

DanShen 12-30g, JiXueTeng 15-30g,
YiMuCao 9-20g, ZeLan 9-15g

Pay attention to Qi Flow & Protect Spleen:

XiangFu 9-15g, ChenPi 6-15g,
FuLing 9-20g



Case Study #4: Diminished Ovarian Reserve (high FSH level)


Female 36 ½ years old.

The patient tried to conceive for three years.

Regular MP (28 days), menstrual cramping for 10 years.

She started consulting a fertility doctor nine months ago, day 2 FSH was 10 at that time. She received clomiphene citrate and IUI for three cycles without success.

The patient and her husband decided to go ahead with in vitro fertilization. They went to one of the most renowned hospital IVF centers, but were very disappointed to find her day 2 FSH measured 22.3 and Anti Mullerian Hormone was 0.4. They were told she didn't qualify for IVF and would have to retest next cycle. Through a friend's recommendation, they came to my office for help.



The patient had a very busy and stressful job. She felt tired all the time. The tongue color was pink and the coating was thin and white.


TCM diagnosis: Kidney Essence deficiency with Spleen Qi and Liver Blood deficiency.

Treatment principle: Tonify Kidney Essence, Spleen Qi and Liver Blood

Treatment plan: Acupuncture twice a week, raw herbal formula twice daily

Herbal formulas: gou qi zi, tu si zi, shu di huang, dang gui, dang shen, fu ling

Acupuncture points: DU 20, DU 24, ST 36 to lift Qi and tonify Spleen, CV 3 & 4, ST 29, zi gong, SP 6. Ear: Uteus and Ovary to tonify Kidney & improve ovarian function.



The patient started her treatment on her cycle day 12. She followed the protocol thoroughly. Her seventh visit was cycle day 36. Her menstrual period did not come and the **pregnancy test showed positive**. The patient continued acupuncture and herbal treatment for preventing miscarriage through 12 weeks of pregnancy. It is now 38 weeks of pregnancy and all the tests are normal.



Summary and discussion:

- After three years of infertility with three cycles of clomid and IUI, and a new FSH level of 22.3, AMH of 0.4 in this cycle (suggested very low ovarian reserve), but the patient got pregnant in the same cycle after acupuncture and herbal treatment.
- Her first visit was on cycle day 12. The treatment wouldn't have affected egg quality, but could have had an impact on ovulation, fertilization and implantation.
- Frequency of acupuncture and herbal treatment play a very important role in fertility outcomes. In this case, the patient received acupuncture twice a week almost through to the end of the cycle.



Thank you